Project Factsheet for:
Lockport Lock and Dam, Upper Pool, Illinois

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Project Location Information

Location: Lockport, Illinois
River Basin(s): Illinois
State(s): IL
Congressional District(s): IL-11, IL-13

Status

The District has received approval of the Reliability Evaluation Report (RER) for the entire three (3) mile approach area of the Upper Lockport Pool. The Corps made repairs to the sinkholes, which developed in October 2001. However, in January 2002 additional sinkholes developed approximately 1800 feet upstream from the one that was observed in October and through the use of Ground Penetrating Radar (GPR) technology additional "suspect" areas were defined. Funding is needed to start construction on a concrete cut-off wall for ¾'s of the length of the embankment, which is nearly a mile and one half long. The integrity of the river walls opposite the dike have been studied and are a part of the RER. A major section of the river walls could fall in to the river with possible loss of pool, loss of life, and damage to river traffic. With the Lockport Lock and Dam Upper Pool ranked as a Category II (Unsafe or potentially unsafe) during the Screening Portfolio Risk Assessment for Dam Safety in 2005, "WEDGE" (Construction General Funding) design funds ($500,000) were made available in July 2006 to start design of the dike repairs. $3,500,000 in "WEDGE" funds were made available in 2007 to continue design, initiate Approach Dike test section construction to validate repair methodology, initiate design of the wall sections, and implement risk reduction measures. As a part of the risk reductions measures tree clearing along the dike embankment has already taken place in 2007.

Description

A "Dam Safety" issue. The project is located within a three mile reach of the Lockport Lock Pool of the Illinois Waterway River (Mile 291.0 - 294.1) at Lockport, Illinois. As part of the Chicago Sanitary Ship Canal, which extends from the Chicago River to the Illinois Waterway, the structures extend from the Lockport Lock. The Lockport Upper pool is a perched pool (38 feet above surrounding area), with a roughly forty-five (45) foot high embankment, on the right descending bank and concrete guide walls on the left descending bank. The embankment requires significant repairs and rehabilitation to ensure continued structural integrity, continued retention of navigation pool, stability of the embankments and substructures, safe access to the hydropower plant, continued safe use of the controlling works, and avoids downstream flooding in the event of failure. Maintenance of critical environmental ecosystems adjacent to the dike is also needed. Without major supplemental funding, the District's ability to adequately restore the embankment's water retaining function will be prevented. Costs for future short term, insufficient "fixes" to embankment seepage will have to be funded from the District's dwindling O&M funding.

The Metropolitan Water Reclamation District of Greater Chicago (MWRD), through Congressional action, transferred the operations and maintenance responsibilities of the substructures and support structures to the US Army Corps of Engineers in the early 1980's for this roughly forty-five (45) foot high embankment, the controlling works and powerhouse substructures, and all pool retention structures. The embankment has had a long history of sinkhole development and surface slumping. The District made significant improvements to the structural stability and erosion resistance of the embankment with the addition of a rock fill shell. In an attempt to prevent further sinkhole development, a shallow cutoff trench was also constructed in the early 1990's and although it has performed satisfactorily for nearly 10-11 years, sinkhole development has resumed in 2001 and 2002. The age and non-homogeneous nature of the original embankment, an extension of the embankment's original height, and the numerous "quick" inexpensive repairs that have been made through the years makes it difficult to guarantee continued satisfactory performance. There is also a great concern that individuals (MWRD employees) traversing this embankment to reach the hydropower plant are in danger of driving into a sinkhole, which has not yet surface expressed itself. With the stagnant nature of the Corps regular Operations and Maintenance budget, repairs cannot be made without impacting equally important projects throughout the District.

Summarized Financial Data

	Rehabilitation	Major Maintenance
Estimated Federal Cost	$123,400,000	$4,600,000
Estimated Non-Federal Cost	$0	$0
Total Estimated Project Cost	$123,400,000	$4,600,000
Federal Allocations through FY 2006	$500,000	$0
Allocations for FY 2007	$3,500,000	$0
Budget Request for FY 2008	$20,445,000	4,600,000
Balance to Complete after FY 2008	$98,955,000	$4,600,000

Major Work Item (This Fiscal Year)

Continue design of the Approach Dike Cut-off Wall, initiate Approach Dike test section construction to validate repair methodology, initiate controlling works construction, initiate design of the wall sections, and implement risk reduction measures.

Major Work Item (Next Fiscal Year)

Construction of the Approach DIke Cut-off wall,and initiate construction of the wall section repair.

Authority

CG - Construction General --

Project Manager Information

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